CLAIMS

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. An entrance window for a gas filled radiation detector, comprising: a plastic core with electro conductive coatings on both an inner side and an outer side of said plastic core.

2. An entrance window for a gas filled radiation detector, as defined in Claim 1, wherein: said plastic core is a high barrier plastic film of low surface density.

3. An entrance window for a gas filled radiation detector, as defined in Claim 1, wherein: said plastic core is a polyethylene terephthalate film.

4. An entrance window for a gas filled radiation detector, as defined in Claim 3, wherein: said polyethylene terephthalate film is multiplayer and oriented.

5. An entrance window for a gas filled radiation detector, as defined in Claim 1, wherein: said plastic core has a thickness of from about 12 μm to about 36 μm.

6. An entrance window for a gas filled radiation detector, as defined in Claim 1, wherein: said electro conductive coating on said outside surface of said plastic core is selected from the group consisting of aluminum, nickel, and inconel.

7. An entrance window for a gas filled radiation detector, as defined in Claim 6, further comprising: a layer of chromium of about 50-100 Å thickness is applied on said plastic core between said plastic core and said electro conductive layer.

8. An entrance window for a gas filled radiation detector, as defined in Claim 6, wherein: said electro conductive layer is aluminum of about 400 Å thickness.

9. An entrance window for a gas filled radiation detector, as defined in Claim 6, wherein: said electro conductive layer is nickel of about 200 Å thickness.

10. An entrance window for a gas filled radiation detector, as defined in Claim 1, wherein: said electro conductive coating on said inner side of said plastic core comprises: at least one pair of "A"/"B" layers, where "A" of a first layer is placed directly on said plastic core and "B" of said first layer is placed on layer "A".

11. An entrance window for a gas filled radiation detector, as defined in Claim 10, wherein: said "A" layer is selected from the group consisting of chromium, nickel, silver, and gold.

12. An entrance window for a gas filled radiation detector, as defined in Claim 10, wherein: said "A" layer is about 50-100 Å thick.

13. An entrance window for a gas filled radiation detector, as defined in Claim 10, wherein: said "B" layer is selected from the group consisting of: aluminum or titanium.

14. An entrance window for a gas filled radiation detector, as defined in Claim 10, wherein: said "B" layer is about 400-500 Å.

15. An entrance window for a gas filled radiation detector, as defined in Claim 1, wherein: said electro conductive coating on said inner side of said plastic core comprises: at least one set of "A"/"B/"C" layers, where "A" of a first layer is placed directly on said plastic core, "B" of said first layer is placed on layer "A", and "C" of said first layer is placed on layer "B".

16. An entrance window for a gas filled radiation detector, as defined in Claim 15, wherein: said "A" layer is chromium of about 50-100 Å thickness.

17. An entrance window for a gas filled radiation detector, as defined in Claim 15, wherein: said "B" layer is selected from the group consisting of: aluminum and titanium.

18. An entrance window for a gas filled radiation detector, as defined in Claim 15, wherein: said "B" layer is about 300-400 Å thick.

19. An entrance window for a gas filled radiation detector, as defined in Claim 15, wherein: said "C" layer is selected from the group consisting of chromium, nickel, silver, and gold.

20. An entrance window for a gas filled radiation detector, as defined in Claim 15, wherein: said "C" layer is about 200-300 Å thick.

21. An entrance window for a gas filled radiation detector, as defined in Claim 10, wherein: said inner layers are multiple "A"/"B" layers.

22. An entrance window for a gas filled radiation detector, as defined in Claim 15, wherein: said inner layers are multiple "A"/"B"/"C" layers.